

ERA Country Report 2023: Slovenia

European Commission

Directorate-General for Research and Innovation

Directorate A — ERA & Innovation

Unit A2 — ERA, Spreading Excellence and Research Careers

Contact Manuel Aleixo, Head of Unit A.2

Heiko Prange-Gstoehl Marlene Schoder-Kienbeck

Email RTD-ERA-FORUM@ec.europa.eu

RTD-PUBLICATIONS@ec.europa.eu

European Commission B-1049 Brussels

Manuscript completed in January 2024

The European Commission shall not be liable for any consequence stemming from the reuse.

© European Union, 2024



The reuse policy of European Commission documents is implemented by Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Unless otherwise noted, the reuse of this document is authorised under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence (https://creativecommons.org/licenses/by/4.0/). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

For any use or reproduction of elements that are not owned by the European Union, permission may need to be sought directly from the respective rightholders. The European Union does not own the copyright in relation to the following elements:

Image credits for cover page and throughout: © skypicsstudio # 286372753, © MicroOne # 288703015, © creativeteam # 323412491, © Viktoriia # 345410470, © Yurii # 372950117, 2022. Source: Stock.Adobe.com

ERA Country Report 2023 Slovenia

Edited by Maja Hranilović (Ecorys)

as part of 'Development of the ERA Scoreboard, the ERA Dashboard and the Regular Reports' project for the European Commission, Directorate-General for Research and Innovation under Framework Contract N° 2018/RTD/A2/OP/PP-07001-2018 Lot 2 (EDAR)

Table of contents

ERA (COUNTRY REPORT 2023: SLOVENIA	3
1. Nat	ional context	3
1.1.	Overview of the ERA policy agenda implementation	3
1.2.	Policy context	4
	sessment of the Implementation of the ERA Policy Agenda and A Priorities	5
2.1.	ERA Priority 1: Deepening a truly functional internal market for knowledge	5
2.2.	ERA Priority 2: Taking up together the challenges posed by the twin green and digital transition and increasing society's participation in the ERA	10
2.3.	ERA Priority 3: Amplifying access to research and innovation excellence across the Union	12
2.4.	ERA Priority 4: Advancing concerted research and innovation investments and reforms	12
3. Cou	untry-specific drivers and barriers	13
4. Fina	al remarks	14
5. Bib	liography	15
6. Anr	nexes	18
6.1.	Annex 1: Graphs	18

ERA COUNTRY REPORT 2023: SLOVENIA

Key takeaways:

- Slovenia is a moderate innovator performing below the EU average according to the European Innovation Scoreboard 2023.
- Slovenia is in the process of significant structural and legal reforms that will
 include additional budget and human resources dedicated to the implementation
 of ERA and R&I objectives. The main driver for this activity is the newly adopted
 Scientific Research and Innovation Activities Act. In addition, the planned budget
 for R&D in 2023 surpassed the funds allocated in previous years.
- The vast majority of the structural and legal reforms have been introduced in 2023, and therefore, their impact and contributions to the ERA Policy Agenda in Slovenia will be seen in the upcoming years.

1. National context

1.1. Overview of the ERA policy agenda implementation

According to the **European Innovation Scoreboard 2023** (EIS 2023),¹ Slovenia is a moderate innovator with a performance of 95.1% of the EU average. Slovenia is working towards the implementation of the **ERA Policy Agenda** through its commitment to 13 of 17 ERA actions. To implement the ERA Policy Agenda, "*Slovenia has set itself ambitious development plans, among which is to become one of the leading innovator countries in the European Innovation Scoreboard (EIS) by 2030".*² These changes have started with the adoption of new legal framework: the **Scientific Research and Innovation Activities Act** followed by **Resolution on the Slovenian Scientific Research and Innovation Strategy 2030** (ReZrIS30).⁴ ReZrIS30 will be supported by action plans and topical strategic documents such as the **Research Infrastructure Roadmap, Open Science Action Plan, Action Plan for Knowledge Transfer Offices and Equal Opportunities Action Plan** that will all contribute to implementation of ERA Actions 1, 2, 5, 7 and 8.⁵

Special attention is paid to adapting Public Research Organisations according to the principles of Open Science in the transition period until mid-2026. For this purpose, the **National Recovery and Resilience Plan**⁶ (RRP) funding is being used to fund a project for

³ Scientific Research and Innovation Activities Act available at: http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7733

https://www.gov.si/assets/ministrstva/MVZI/Znanost/Strategije-predpisi-in-drugi-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf

¹ European Commission, Directorate-General for Research and Innovation, Hollanders, H. et al (2023) European Innovation Scoreboard 2023 Country profile Slovenia, available at: https://ec.europa.eu/assets/rtd/eis/2023/ec_rtd_eis-country-profile-si.pdf

² OECD STIP Survey, 1.1 Governance debates, p.1

⁴ Ministry of Higher Education, Science and Innovation, Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30), (2023), available at:

⁶ Slovenia RRP. https://www.gov.si/en/registries/projects/the-recovery-and-resilience-plan/

the relevant adaptation of organisations. In addition, two new repositories for research data will be set up using funds under the Recovery and Resilience Facility (RRF).

1.2. Policy context

Structural reforms began in 2022 to update the formation and governance structure of R&I in Slovenia. It included setting up the **Ministry of Higher Education, Science and Innovation**⁷ (previously the Ministry of Education, Science and Sport) to cover innovation under its remit. The key body for innovation activity is the **Innovation Council**, which operates as the highest expert body of the **Slovenian Research and Innovation Agency (ARIS)**,⁸ composed of members representing the various stakeholders in the innovation ecosystem.

Under the authority of the Ministry of Education, Science and Sport, the **Resolution on the Slovenian Scientific Research and Innovation Strategy 2030**⁹ (ReZrIS30) was adopted, the government was restructured, and the Ministry of Higher Education, Science and Innovation was established and began operating as an independent entity in April 2023.

In March 2023, the National Assembly amended the Scientific Research and Innovation Activities Act¹⁰ while the government adopted the Strategy for the Internationalisation of Higher Education and Science in the Republic of Slovenia 2030.

The budgets for 2023 and 2024 provide additional integral funds for scientific research activities. In accordance with the **Scientific Research and Innovation Activities Act** (ZZrID), stable funding will increase by an additional EUR 7.5 million or 3% (30% of the total growth of the budget item), from the initial EUR 225 million in 2023 to EUR 232 million in 2024. Moreover, in 2024, research organisations that already receive stable funding will additionally profit from a development pillar of EUR 13.1 million.¹¹

Overall, the main framework for implementation of the ERA Policy Agenda is set in the Scientific Research and Innovation Activities Act,¹² the Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30),¹³ the Research Infrastructure Roadmap 2030 (NRRI 2030), and the Knowledge Platform.¹⁴

⁹ Ministry of Higher Education, Science and Innovation, Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30), (2023), available at:

https://www.gov.si/assets/ministrstva/MVZI/Znanost/Strategije-predpisi-in-drugi-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf

4

⁷ Ministry of Higher Education, Science and Innovation. https://www.gov.si/en/state-authorities/ministries/ministry-of-higher-education-science-and-innovation/

⁸ Slovenian research and innovation agency, https://www.arrs.si/en/

¹⁰https://www.gov.si/en/news/2023-03-25-national-assembly-adopts-an-amendment-to-the-scientific-research-and-innovation-activities-act/

¹¹ "Planned financing of scientific research and innovation activities in 2024", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation (2023), available at: https://www.gov.si/novice/2023-09-08-nacrtovano-financiranje-znanstvenoraziskovalne-in-inovacijske-dejavnosti-v-letu-2024/

¹² https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf

¹³ Ministry of Higher Education, Science and Innovation, Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrlS30), (2023), available at:

https://www.gov.si/assets/ministrstva/MVZI/Znanost/Strategije-predpisi-in-drugi-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf

¹⁴ https://www.gov.si/zbirke/projekti-in-programi/platforma-znanja/

2. Assessment of the Implementation of the ERA Policy Agenda and ERA Priorities

Chapter 2 has two objectives: 1) It qualitatively assesses the state-of-play of the implementation of the ERA actions that Slovenia has committed to. The qualitative information stems from the OECD STIP survey 2023 and additional documents, including the European Semester Report; 2) It quantitatively assesses the country's progress towards achieving the ERA priorities as set out in the Pact for Research and Innovation in Europe. The presented quantitative information is mainly based on the ERA Scoreboard and ERA Dashboard indicators¹⁵, but also the European Innovation Scoreboard 2023, and covers longer-term trends since 2010. Additionally, general indicators for the overall R&I system are outlined in Table 1. More detailed information on the data and graphs can be found in Annex 1. This report will serve as a baseline for reporting in the future.

Table 1. General ERA Scoreboard and ERA Dashboard indicators¹⁶

Indicator	Most recent EU average	Most Recent Metric
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26 (2021)	2.11 (2022)
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76 (2021)	0.54 (2022)
Researchers (in full-time equivalent) per million inhabitants	4,483.4 (2021)	5,249.5 (2021)
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49 (2021)	1.5 (2022)

Source: compiled by research team based on the ERA Scoreboard and ERA Dashboard indicators

2.1. ERA Priority 1: Deepening a truly functional internal market for knowledge

2.1.1. State of play in the implementation of the ERA Actions

In relation to **ERA Action 1:** Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC), Slovenia has a Mandated Organisation appointed to the **EOSC Association**, and its central portal for Open Science¹⁷ was included as a best practice example in the **EOSC Catalogue of Best Practices.**¹⁸ According to the EOSC Survey 2021, additional policies in support of open science were in the planning phase in Slovenia. The main instrument is the **Action plan for Open Science**, adopted in 2023.¹⁹ It is responsible for the National Open

¹⁵ See https://european-research-area.ec.europa.eu/era-monitoring-reports.

¹⁶ Further information on the trends can be found in Annex 1

¹⁷ National Open Science Portal, available at: https://openscience.si/ .

¹⁸ EOSC Future (2023), WP2 Report: EOSC Catalogue of Best Practices, available at: https://zenodo.org/records/7574165.

¹⁹ Action plan for Open Science, available at:

https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/2023-Action-Plan-Open-Science-Slovenia.pdf

Science infrastructure, and manages the training of researchers and the development of R&I in accordance with the principles of Open Science.

Additionally, the principle of open science is also covered in the country's **Recovery and Resilience Plan**. ²⁰ With the aim of improving the progress towards the initiatives under the national plan, Slovenia receives funding from international resources as **NextGenerationEU** and **REACT-EU**.

As regards **ERA Action 2**: *Propose an EU copyright and data legislative framework for research* Slovenia has implemented one of the most progressive **text and data mining** (TDM) exceptions in the copyright legislation in the EU.²¹ Additionally, Slovenia has also implemented a general TDM exception for scientific research, that allows the remote and open access to the reproduction of TDM in specific cases. Although it is a modest and narrow exception it is promising.

In relation to ERA Action 3: Advance towards the reform the Assessment System for research, researchers and institutions to improve their quality, performance, and impact, two initiatives were launched in 2022 involving structural reforms targeted towards higher education institutions. The main goal of these initiatives is to ensure the HEIs are of high quality compared with international standards, and thus enable the attraction of highly skilled talent, and cultivate scientific excellence. Slovenia is also represented by seven signatories to the Coalition for Advancing Research Assessment (CoARA)²². Moreover, a stakeholder engagement event was organised by the Ministry of Higher Education, Science and Innovation, where ERA Action 3 and the objectives of CoARA were presented and first national discussions took place.

Regarding **ERA Action 4**: *Promote attractive and sustainable research careers, balanced talent circulation and international, transdisciplinary, and inter-sectoral mobility across the ERA*, the OECD STIP Survey identifies a large number of initiatives structural reforms. Those reforms include activities aimed at the internationalisation of science for higher education institutions, such as through participation in **MSCA Seal of Excellence projects**, as well as tenders directly targeted to students for gaining practical experience and the development of social projects. Integrated mobility measures for supporting the objectives of the European Research Area were also launched.²³

In addition, the **Scientific Research and Innovation Activities Act** mandates ARIS to publish separate project calls according to the stage of the research career, thus supporting the development of the research career.²⁴

In relation to the ERA Action 5: Promote gender equality and foster inclusiveness, taking note of the Ljubljana declaration, the Slovenian Scientific Research and Innovation Strategy 2030²⁵ has clearly set gender equality and equal opportunities as a principles. Measures are ambitiously set out in the new Resolution on the Slovenian Scientific

²⁰ Government of Republic of Slovenia Service for Development and European Cohesion Policy, Recovery and Resilience Plan (2021), available at: https://www.eu-skladi.si/sl/dokumenti/rrf/povzetek-noo 08 07 2021 cistopis-1.pdf

²¹https://www.knowledgerights21.org/blog/exceptions-with-teeth-the-new-slovenian-text-and-data-mining-provisions/

²² Coalition for Advancing Research Assessment (COARA) webpage, available at: https://coara.eu/

²³ Mobility and internationalisation, available at: https://eurydice.eacea.ec.europa.eu/national-education-systems/slovenia/mobility-and-internationalisation

²⁴ National Assembly adopts an amendment to the Scientific Research and Innovation Activities Act | GOV.SI

²⁵ Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf (gov.si)

Research and Innovation Strategy 2030 concerning the progress towards gender equality objectives and fostering the integration of the gender dimension in research. Ensuring gender balance in committees and working bodies is one of the measures of the Slovenian R&I strategy, supported by national legislation (Scientific Research and Innovation Activities Act, Equal Opportunities for Women and Men Act).²⁶

The Commission for Equal Opportunities in Science²⁷ as a Ministerial Expert Body plays a vital role in supporting and promoting gender mainstreaming and equal opportunities in research and innovation. The Commission's task is to identify systemic barriers, support gender equality awareness activities and assist in drafting legal acts and strategic documents which provide expert guidance and ensure that policies and actions are evidence-based and effective.

Furthermore, the project "Ethics, Integrity and Gender Equality in the Research Sector of Slovenia: Between Policies and Their Implementation 128 (2021-2023) aimed at strengthening the capacity to implement the principles of responsible science in the areas of ethics, integrity, and gender equality, as well as to provide knowledge and skills for stakeholders to adopt these principles.

In relation to the ERA Action 7: Upgrade EU guidance for a better knowledge valorisation, in 2023 an awareness raising campaign for knowledge valorisation - under the framework of the yearly International Technology Transfer Conference²⁹ - promoted knowledge exchange between academia and industry in order to strengthen the cooperation and transfer of innovations from research labs into industrial exploitation. 30 In addition, national institutes, as the Jozef Stefan Institute Ljubljana, are closely related to European knowledge valorisation initiatives.

The Research Infrastructure Roadmap 2030 (NRRI 2030)³¹ is the main strategic document at the national level in relation to ERA Action 8: Strengthen sustainability, accessibility, and resilience of research infrastructures in the ERA. It defines the Slovenian priorities in this regard, and aims to establish an accessible, innovative, and ambitious programme for research infrastructure in accordance with ESFRI. It builds on the previous Research Infrastructure Roadmap (2011-2020), which promoted the Research Infrastructure for the International Competitiveness of the Slovenian RDI Area (RI-SI) project³². The project supports the participation of Slovenia in seven international infrastructures.³³ Additionally, in September 2023, Slovenia hosted the first event from the FAIR National Roadshow³⁴ series organised by the FAIR-IMPACT project in cooperation with the University of Maribor and the Slovenian Open Science Community.³⁵

²⁷ https://www.ki.si/en/about-the-institute/identity-card/organizational-chart/council-for-equal-opportunities-inscience/

²⁸https://ikss.zrc-sazu.si/en/programi-in-projekti/ethics-integrity-and-gender-equality-research-area-sloveniabetween-policies

²⁹ https://www.fis.unm.si/16th-international-technology-transfer-conference-ittc/?lang=en

³⁰ http://ittc.ijs.si/objectives/

³¹ National Roadmap.https://www.gov.si/assets/ministrstva/MIZS/Dokumenti/Zakonodaja/EN/2022/Research-Infrastructure-Roadmap-2030.pdf

³² https://www.gov.si/assets/ministrstva/MIZS/Dokumenti/Zakonodaja/EN/2022/Research-Infrastructure-Roadmap-2030.pdf

³³ CERIC, CLARIN, DARIAH, EATRIS, ELIXIR, EPOS and LifeWatch

³⁴ https://fair-impact.eu/events/national-roadshows

³⁵ National Roadshow Series. https://odprtaznanost.si/obvestila/fair-impact-roadshow-prihaja-v-slovenijo/

The country is also committed to ERA Action 9: Promote a positive environment and level playing field for international cooperation based on reciprocity. At the beginning of 2023, the Ministry of Higher Education, Science and Innovation adopted the Strategy for the Internationalisation of Higher Education and Science in the Republic of Slovenia 2030.³⁶ The actions foreseen in the strategy are based on the principles and values for R&I put forward by the Pact for Research and Innovation in Europe. Thereby, they translate the aspects of international cooperation within ERA to the national domain, and secure that international cooperation with third countries is based on the common principles and values.

2.1.2. Progress towards achieving ERA Priorities

With regard to progress towards **Sub-priority 1.1:** *Open Science*, Slovenia was above the EU-27 average in terms of the **share of publications available in open access** (Figure 5 in Annex 1) with higher increase in Slovenia compared to the EU-27 in 2009-2019 period.

In relation to Sub-priority 1.2: Research infrastructures and looking at the share of national public R&D expenditure allocated to European research infrastructures in 2022, Slovenia registered a value of 1.68%, slightly below the EU average of 1.82%.³⁷ In addition, the indicator on number of European research infrastructures in which a Member State participated in 2021 shows that Slovenia was below the EU-27 average of 15.46 in 2021 and Slovenian 14 (Figure 6 in Annex 1).

Sub-priority 1.3: Gender equality, equal opportunities for all and inclusiveness is measured through different indicators. The **share of women in grade A positions in HEIs** (Figure 7 in Annex 1) shows that in 2010 the value for Slovenia was higher than the EU-27. Although the data for both increased during the period, the country remained above the European average. In terms of the **proportion** (%) **of women among doctoral graduates by narrow fields of Science, Technology, Engineering and Mathematics (STEM)** Slovenia is aligned with the EU-27 average as illustrated in

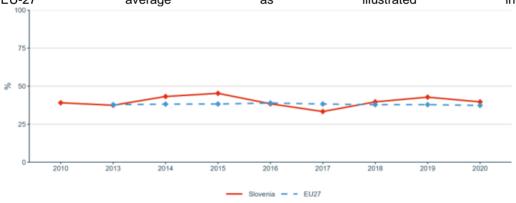


Figure 8 in Annex 1, following both a similar trend.

-

³⁶ https://eng.cmepius.si/wp-content/uploads/2015/08/Strategija-internacionalizacije-slovenskega-visokega-solstva_ENG_2016%E2%80%932020_WEB.pdf

³⁷ The EU average for this indicator is calculated considering the contributions of the 15 EU Member States for which data is available, which includes: Belgium, Bulgaria, Spain, France, Greece, Hungary, Italy, Latvia, Malta, The Netherlands, Poland, Portugal, Romania, Slovenia and Slovakia. In addition, the data is also available for two Associated Countries: Iceland and Norway.

Under the same sub-priority, the indicator on the *proportion of papers with mixed gender authorship* suggests that Slovenia is behind the EU-27 average during whole observed period (2010-2020) as seen in Figure 9 in Annex 1. However, the progress on the *proportion of women in authorships of the top 10% most cited publications, 2000–2018* was similar between the EU-27 and Slovenia. However, the values for the country decreased slightly and ended below the European average in 2018 (



Figure 10 in Annex 1). Lastly, the indicator *Women in Digital Index in 2022* shows that Slovenia is above EU-27 average with a value of 58.22 compared with 54.86 (Figure 11 in Annex 1).

Analysing Sub-priority 1.4: Researchers' careers and mobility and research assessment and reward systems, the indicator share of foreign doctorate students as a percentage of all doctorate students was significantly below EU-27 average in 2015 (Figure 12 in Annex 1). However, the prompt increase of the Slovenian values reduced the gap during the period. For the indicator on the new doctorate graduates per 1,000 inhabitants aged 25-34, Slovenia was above the EU-27 until 2016. However, the decrease that followed made both values similar during the rest of the period. Furthermore, the Slovenian trend for the indicator on job-to-job mobility of Human Resources in Science and Technology fluctuated over time, while the EU-27 average remained stagnated (Figure 14 in Annex 1).

With regards to progress towards **Sub-priority 1.5**: *Knowledge valorisation*, the indicator on the *share of public-private co-publications* shows that Slovenia is performing consistently above the European average (Figure 15 in Annex 1). Similarly, the *number of PCT patent applications divided by GDP in million Euros* in Figure 16 in Annex 1, was higher in Slovenia during the whole period. The country reached its peak in 2013 with 0.00427 PCT patent applications.

For the indicator on *business enterprise researchers as % of national researchers*, Slovenia started below the EU-27 average in 2010 (Figure 17 in Annex 1). Over the period, the data for Slovenia improved and reached in 2020 61.44%, compared to 55.28% on the EU-27 level. Likewise, in 2010 Slovenia was below the EU-27 in terms of *business enterprise researchers in full-time equivalent per thousand employments in industry*. However, the situation changed and, in 2020, Slovenia surpassed the EU-27 average with 8.0 researchers (s

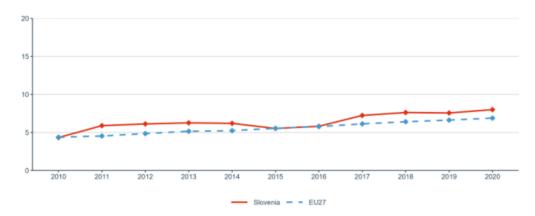


Figure 18 in Annex 1). Finally, the **share of innovating firms collaborating with higher education institutions or public/private research institutions** (Figure 19 in Annex 1) has also shown high values in Slovenia. Although the data was stagnant over the period, in 2020 it decreased but remained above the European level.

In terms of Sub-priority 1.6: Scientific leadership, the number of scientific publications among the top-10% most cited publications worldwide as a percentage of all publications, the EU-27 started in 2010 with 10.12 publications compared with 6.30 in Slovenia (Figure 20 in Annex 1). During whole period, the gap decreased but Slovenia remained below. In the case of the Academic Freedom Index (AFi), both the EU-27 and Slovenia had a stable trend and remained similar over time



Figure 21 in Annex 1.

Under Sub-priority 1.7: Global engagement, Slovenia performs above Europe in terms of international co-publications with non-EU partners per 1,000 researchers in the public sector. In 2022 the number of publications in Slovenia doubled compared to 2010 (Figure 22 in Annex 1). The indicator on European and international co-patenting in EPO applications at national and EU level shows that Slovenia is behind the EU-27 average over the whole analysed period (

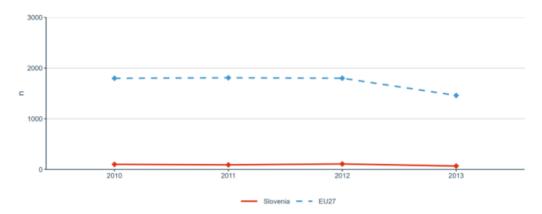


Figure 23 in Annex 1).

2.2. ERA Priority 2: Taking up together the challenges posed by the twin green and digital transition and increasing society's participation in the ERA

2.2.1. State of play in the implementation of the ERA Actions

In relation to ERA Action 10: Make EU R&I missions and partnerships key contributors to the ERA, national engagement process and national coordination for partnerships is one of the elements for implementation of the ERA Policy Agenda. In the past years, there has been a proliferation of instruments and initiatives to enhance the cooperation and even coordination of national strategies and programmes in the field of research. The Co-funded type of partnership³⁸ is the key initiative for the execution of a joint international tender between funding organisations. The national scientific community has been well involved in the implementation of the EU Missions and first reflections on establishing possible national hubs or networks have been carried out (e.g. Cancer Mission, cooperation between Ljubljana, Kranj and Velenje in the Cities Mission).

Structural reforms are key for ERA Action 12: Accelerate the green/digital transition of Europe's key industrial ecosystems. These are also related to the aforementioned Council and Committee, as it is also managed under the Slovenian Smart Specialisation Strategy - from S4 to S5.³⁹ In this sense, actions 10 and 12 are areas where interlinkages between R&I actors have been increased by engaging the Ministry of Economic development and technology (transformed into Ministry of the Economy, Tourism and Sport from January 2024) and inter-ministerial consultations within Missions' sub-groups in Horizon Europe. ARIS is also implementing calls for large projects financed by the RRF dedicated to the goals of the twin transition.

In relation to the ERA Action 13: Empower Higher Education Institutions to develop in line with the ERA, and in synergy with the European Education Area, the main initiative is related to stable financing of scientific research activity and implemented by the Public Agency for Scientific Research and Innovation Activity of Slovenia (ARIS). Recipients of stable funding were public research organisations, public institutes that are not public research organisations and are established based on other laws as well as concessionaires based on concessions for the performance of public service in the field of scientific research.⁴⁰

In relation to **ERA Action 14**: *Bring Science closer to Citizens*, the overarching document for this activity is **ReZrIS30**, which provides the strategic basis for activities to promote citizen science and public involvement in scientific research. Slovenia participated in the **MLE on Citizen Science**⁴¹ and adopted the **Action Plan on Open Science**, which foresees, for example, the setting-up of a national citizen science network and a database of projects or developing guidelines for citizen science. Other activities developed in relation to ERA Action

³⁸ https://www.era-learn.eu/partnerships-in-a-nutshell/type-of-networks/co-funded-european-partnerships

³⁹ Smart Specialisation Strategy. https://www.eu-skladi.si/portal/en/post-2020-1/programming-

^{1/}slovenian_smart_specialisation-strategy

⁴⁰ https://www.arrs.si/sl/stabilno/

⁴¹ Mutual Learning Exercises. https://projects.research-and-innovation.ec.europa.eu/en/statistics/policy-support-facility/psf-challenge/mutual-learning-exercise-citizen-science-initiatives-policy-and-practice

⁴² Action Plan on Open Science. https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/2023-Action-Plan-Open-Science-Slovenia.pdf

14, include media promotion of science, the engagement of the civil society, and the endorsement of the **European Charter & Code for Researchers**.⁴³ among others.

2.2.2. Progress towards achieving ERA Priorities

With regard to progress towards **Sub-priority 2.1:** Challenge-based ERA actions, the **Government budget allocations for R&D (GBARD) by NABS** in energy; environment; transport, and telecommunications and other infrastructure has been analysed (Figure 24 in Annex 1). The GBARD from transport was relatively similar in both regions and the data became closer over time. The gap between the data for Europe and for Slovenia in terms of energy was noticeable. Both increased during the period, but while Slovenia reached a 11.0 the European average registered a 1,170. Regarding Environment, the Slovenian data from 2010 to 2021 was consistently below the EU-27. Regarding the **Government budget allocations for R&D (GBARD) allocated to Europe-wide transnational, as well as bilateral or multilateral, public R&D programmes per FTE researcher, the EU-27 remains above during the whole period. However, the value for Slovenia increases until 2020, with a value of 1,156 as seen in Figure 25 in Annex 1.**

In addition, the *environmentally related government R&D budget as percentage of total government R&D* (Figure 26 in Annex 1) is showing that Slovenia is significantly above the EU-27. The indicator on the *national public and private investments as suggested in the SET Plan progress report 2021* shows a strong gap between Slovenia and the EU-27 average, with Slovenia experiencing some fluctuations during the period but remaining around 10 (Figure 27 in Annex 1). Lastly, for the *OECD Patents on environment technologies*, Slovenia is behind the EU-27 average. While the gap reduced until 2016, the number of patents in Slovenia falls in 2017 reaching in 2019 a value of 9.18 patents (Figure 28 in Annex 1).

Under Sub-priority 2.2: Synergies with education and the European Skills Agenda, the indicator on the share of researchers receiving transferable skills training has decreased in both the EU-27 average and Slovenia. Although the country was above the EU-27 average in 2016, it fluctuates during the period and falls below the EU-27 average in 2019 (Figure 29 in Annex 1).

In relation to **Sub-priority 2.3:** Synergies with sectorial policies and industrial policy, in order to boost innovation ecosystems, the **direct government support and indirect government support through R&D tax incentives as a percentage of GDP** shows that Slovenia and the EU-27 average have comparable results with 0.2% during whole period (Figure 30 in Annex 1).

Sub-priority 2.4: An active citizen and societal engagement in R&I in all its dimensions is identified with *trust in science in 2021*. The value for Slovenia is slightly below the EU-27 average (EU-27 41.5% and Slovenia 43.2%) as seen in Figure 31 in Annex 1. Furthermore, Slovenia is overperforming in comparison to the European average in terms of the *research on social innovation (publications on 'social innovation' or 'social entrepreneurship') per million population* (Figure 32 in Annex 1).

_

⁴³ European Charter and Code for Researchers. https://euraxess.ec.europa.eu/jobs/charter

2.3. ERA Priority 3: Amplifying access to research and innovation excellence across the Union

2.3.1. State of play in the implementation of the ERA Actions

Slovenia has not committed to any action under this Priority Area. Nevertheless, according to the OECD STIP Survey, several initiatives have been developed in relation to **ERA Action 16:** *Improve EU-wide Access to excellence*, including a project worth over EUR 5 million on the development of national infrastructure that enables participation in accordance with **NRRI 2030.** 44

The country has committed to **ERA Action 17**: *Enhance the strategic capacity of Europe's public research performing organisations*, and consequently aims to reinforce the initiatives at the European level. For this reason, Slovenia has engaged in various international programmes for cooperation in the area of R&I. As part of Horizon Europe, two Slovenian institutions received the **EU Seal of Excellence in the call for the Marie Sklodowska COFUND projects**. ⁴⁵ The University of Ljubljana received the recognition fur to its research on green sustainability, and the Slovenian Institute of Chemistry was awarded for the training of the scientific community.

2.3.2. Progress towards achieving ERA Priorities

The indicator related to Sub-priority 3.1: More investments and reforms in countries and regions with lower R&I performance on the increase (in percentage points) of total R&D expenditure expressed as a percentage of GDP, shows that Slovenia experienced fluctuations over the period from 2010 to 2021. In comparison, the EU-27 average remained constant (Figure 33 in Annex 1).

2.4. ERA Priority 4: Advancing concerted research and innovation investments and reforms

2.4.1. State of play in the implementation of the ERA Actions

In relation to **ERA Action 19**: *Establish an efficient and effective ERA monitoring mechanism*, Slovenia has developed **SICRIS**, a national information system with databases on researchers, research organisations and research projects integrated and interconnected among each other. It is connected to the COBISS.SI information system (Co-operative Online Bibliographic System and Services) and its COBIB.SI bibliographic database thus allowing users (i) a direct insight into researchers' bibliographies, (ii) the evaluation of research performance bibliographic indicators, and (iii) identification of citations on the basis of the links to the Web of Science and Scopus services.⁴⁶

Slovenia started to **develop a common system for monitoring and evaluating policies** in the field of research, development, and innovation (RDI) and related policies. The project, that is financed through the **Resilience and Recovery Facility**,⁴⁷ will encourage the

⁴⁴Research Infrastructure Roadmap. Government of the Republic of Slovenia adopts Research Infrastructure Roadmap 2030 | GOV.SI

⁴⁵ https://www.gov.si/en/news/2023-01-20-the-eu-seal-of-excellence-awarded-to-the-university-of-ljubljana-and-the-national-institute-of-chemistry/

⁴⁶ https://cris.cobiss.net/ecris/si/en

⁴⁷ https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility en

systematic introduction of monitoring and evaluation of policies in the field of RDI and related policies. This will enable Slovenia to monitor trends and pursue strategic planning.

2.4.2. Progress towards achieving ERA Priorities

Regarding Sub-priority 4.1: Coordination of R&I investments, the indicator on the share of public R&D expenditures financed by the private sector in the period 2010-2020 shows a decreasing trend. The values for Slovenia went from a 12.57% in 2010 to 6.63% in 2020, positioning the country under the European level (Figure 34 in Annex 1).

3. Country-specific drivers and barriers

At the policy level, the implementation of national initiatives during the last years has strengthened the Slovenian R&I environment, aligned with the ERA Policy Agenda. The structural reform encouraged by the Recovery and Resilience Plan (RRP), described in the European Semester Report 2023⁴⁸, has promoted the inclusion of research in different sectors. It is key for enhancing "knowledge-based decision-making", supported by new legislation such as the Scientific Research and Innovation Activities Act. 49 It encourages the research-performing organisations to establish companies (start-ups, spin-outs, spin-offs) through tax incentives, which is a major step to improving the knowledge transfer and the R&I ecosystem.

Some new instruments address the twin transition (digitalisation, low carbon technologies and circular economy) as a major focus of the **Recovery and Resilience Facility**. In this sense, the new ESIF (European Structural and Investment Funds) funded collaborative projects between RPOs, and the business sector also address the green transition in line with the Smart Specialisation Strategy. Following this, the **Training and Carbon-Free Technologies Centre Trbovlje**⁵⁰ represents a part of a thematic ecosystem in batteries and hydrogen. Furthermore, the establishment of the Institute of Chemistry's Biomass Biorefinery Laboratory, also financed by the Just Transition Fund, has a huge potential for upgrading to biorefinery.

Slovenia faces some challenges for the implementation of the ERA Policy Agenda. While the Slovenian government has the goal to become one of the leading innovator countries by 2030,⁵¹ the decrease in innovation funding has triggered significant structural changes and reforms of the system. Similarly, the lack of ICT specialists and infrastructure appears to be hindering the digital transformation of businesses. Around 78% of Slovenian businesses recruiting ICT specialists reported difficulties in finding adequately skilled employees, which is the highest share in the EU.⁵² Moreover, the R&D intensity of the Slovenian ICT sector is below the EU average.

⁴⁹ https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf

⁴⁸ European Semester documents for Slovenia, available at: https://commission.europa.eu/business-economy-euro/economic-and-fiscal-policy-coordination/european-semester/european-semester-your-country/slovenia en

⁵⁰ https://www.ki.si/fileadmin/user_upload/datoteke-splosno/Dogodki/2022/Letak__Demo_center_V3-brez_porezave.pdf

⁵¹ Slovenia. OECD STIP Survey. https://stip.oecd.org/stip/interactive-dashboards/countries/Slovenia
⁵² European Semester documents for Slovenia, available at: https://commission.europa.eu/business-economy-euro/economic-and-fiscal-policy-coordination/european-semester/european-semester-your-country/slovenia en

For these reasons, Slovenia is developing new initiatives to develop high-quality and globally comparable scientific research activities, enabling faster development and better integration. For example, the RRP⁵³ in 2022-2023 provided funding for the R&I governance reform foreseen in the new Act on R&I. The goal of the new Act is to ensure a modern scientific research and innovation system that will enable a higher quality of life for everyone and improve the competitiveness of the Slovenian economy. Furthermore, the Council recommendation on the 2022 National Reform Programme of Slovenia⁵⁴ includes an extensive set of mutually reinforcing reforms and investments to be implemented by 2026. It introduces reforms and investments addressing a significant subset of the challenges identified in the country-specific recommendations to Slovenia as part of the European Semester Reports. In particular, the plan addresses challenges related to fiscal policies and public finances, social safety nets, employment and social, business environment and R&D investments, and the green and digital transition.

4. Final remarks

The implementation of the ERA Policy Agenda is underpinned by various initiatives such as the Scientific Research and Innovation Activities Act and the Resolution on the Slovenian Scientific Research and Innovation Strategy 2030. To reach its goal of becoming one of the leading innovators, the Government has restructured its Ministries and given significantly higher authority to the newly established Ministry of Higher Education, Science, and Innovation. The new Ministry has established new bodies specifically designated for the implementation of ERA activities (e.g. the Innovation Council under ARIS and the Programme Committee for R&I policy coordination).

The country has demonstrated positive progress in most Priorities, especially in open science, gender and knowledge valorisation under ERA Priority 1. However, Slovenia has registered high fluctuations or a slight decrease in most indicators related to ERA Priorities 2 and 3 in the last few years. In terms of ERA Priority 4, the private sector's role in research, development, and innovation has stagnated for the past few years.

The challenges the country experiences in relation to the ERA Policy Agenda are now being addressed by initiatives at the national and international levels to improve Slovenia's position in the R&I context, including higher visibility and valorisation of science, open data access, data exchange and internationalisation.

In conclusion, Slovenia's steadfast commitment to advancing research and innovation aligns with the objectives of the European Research Area. By leveraging its recent reforms, bolstered by strategic investments and collaborative efforts, Slovenia is prepared to enhance its innovation capacity and contribute to Europe's research and innovation ecosystem in the future.

⁵³ Recovery and Resilience Plan. Slovenia's recovery and resilience plan - European Commission (europa.eu)

⁵⁴ Council recommendation, available at: https://commission.europa.eu/system/files/2022-05/2022-european-semester-csr-slovenia en.pdf

5. Bibliography

Act on Scientific Research and Innovation Activities, available at: http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7733

Awareness raising campaign for knowledge valorisation website, available at: http://ittc.ijs.si/

Coalition for Advancing Research Assessment (COARA) webpage, available at: https://coara.eu/

"Commission for Equal Opportunities in Science", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation, Directorate for Science and Innovation, available at: https://www.gov.si/zbirke/delovna-telesa/komisija-za-enake-moznosti-na-podrocju-znanosti/

"Council of the Republic of Slovenia for Higher Education", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation, available at: https://www.gov.si/zbirke/delovna-telesa/svet-republike-slovenije-za-visoko-solstvo/

European Commission, Directorate-General for Research and Innovation, Hollanders, H. et al (2023) European Innovation Scoreboard 2023 Country profile Slovenia, available at: https://ec.europa.eu/assets/rtd/eis/2023/ec_rtd_eis-country-profile-si.pdf

European Commission, Directorate-General for Research and Innovation, Gold, M. et al (2022) Citizen science initiatives: policy and practice: final report, available at: https://op.europa.eu/sl/publication-detail/-/publication/63baa6bb-d359-11ed-a05c-01aa75ed71a1/language-sl

"FAIR-IMPACT Roadshow is coming to Slovenia", Slovenian open science community website (2023), available at: https://odprtaznanost.si/obvestila/fair-impact-roadshow-prihaja-v-slovenijo/

Government of Republic of Slovenia Service for Development and European Cohesion Policy, Recovery and Resilience Plan (2021), available at: https://www.eu-skladi.si/sl/dokumenti/rrf/povzetek-noo_08_07_2021_cistopis-1.pdf

Government of the Republic of Slovenia, Action plan for Open Science for the implementation of Objective 6.2: Open Science to improve the research quality, efficiency, and responsiveness of the Knowledge platform website, available at: https://www.gov.si/zbirke/projekti-in-programi/platforma-znanja/

"Implementation and renewal of the Slovenian Smart Specialization Strategy - from S4 to S5", Government of Republic of Slovenia, Ministry of Cohesion and Regional Development, available at: https://www.gov.si/zbirke/projekti-in-programi/izvajanje-slovenske-strategije-pametne-specializacije/

Ministry of Education, Science and Sport, Research Infrastructure Roadmap 2030 (NRRI 2030), available at:

https://www.gov.si/assets/ministrstva/MIZS/Dokumenti/Zakonodaja/EN/2022/Research-Infrastructure-Roadmap-2030.pdf

Ministry of Higher Education, Science and Innovation, Enhanced Policy Dialogue on the R&I system in

Ministry of Higher Education, Science and Innovation, Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30), (2023), available at:

https://www.gov.si/assets/ministrstva/MVZI/Znanost/Strategije-predpisi-in-drugi-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.pdf

"National Assembly adopts an amendment to the Scientific Research and Innovation Activities Act", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation (2023), available at: https://www.gov.si/en/news/2023-03-25-national-assembly-adopts-an-amendment-to-the-scientific-research-and-innovation-activities-act/

National Open Science Portal website, available at: https://www.openscience.si/

OECD STIP Survey, 1.1 Governance debates, p.1

"Planned financing of scientific research and innovation activities in 2024", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation (2023), available at: https://www.gov.si/novice/2023-09-08-nacrtovano-financiranje-znanstvenoraziskovalne-in-inovacijske-dejavnosti-v-letu-2024/

"Program committee for operational coordination of scientific research and innovation policy", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation, available at: https://www.gov.si/zbirke/delovna-telesa/programski-odbor-za-operativno-usklajevanje-znanstvenoraziskovalne-in-inovacijske-politike/

"Report of the Ministry of Higher education, Science and Innovation", Latest news, Eurydice Slovenija, available at: https://www.eurydice.si/novice/zadnje-novice/porocilo-ministrstva-za-visoko-solstvo-znanost-in-inovacije/

Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrlS30), (2023), available at: https://www.gov.si/assets/ministrstva/MVZI/Znanost/Nacionalne-strategije-in-dokumenti/2023-Action-Plan-Open-Science-Slovenia.pdf

"R&D investments and the workload of personnel up", Republic of Slovenia, Statistical Office webpage, available at: https://www.stat.si/StatWeb/en/News/Index/10968

Slovenia, Executive Report, (2023), available at: https://www.gov.si/assets/ministrstva/MVZI/Znanost/Obzorje-Evropa/Novice/2023-EC-dialog/SI Enhanced-Policy-Dialogue report 9.5.2023.pdf

Slovenian COVID-19 Data Portal website, available at: https://covid19dataportal.si/

Slovenian Current Research Information System (SICRIS) webpage, available at: https://cris.cobiss.net/ecris/si/en

Slovenian national supercomputer network (SLING) webpage, available at: https://www.sling.si/sling/

"Stable financing of scientific research activity", Public agency for scientific research and innovation activity of the Republic of Slovenia webpage, available at: https://www.aris-rs.si/sl/stabilno/

Tender "Strengthening the role of career centers in the holistic treatment of students", Government of Republic of Slovenia, Ministry of Higher Education, Science and Innovation (2022), available at: https://www.gov.si/zbirke/javne-objave/krepitev-vloge-kariernih-centrov-v-celostni-obravnavi-studentov/

6. Annexes

6.1. Annex 1: Graphs

The 2023 ERA Scoreboard and ERA Dashboard indicators used in the country report are presented in this annex. Detailed information on the data sources, description of the indicators, time period for which the data is available, and the necessary calculations can be found in the ERA Scoreboard and ERA Dashboard Methodology Report. The most recent available data for each indicator has been used.

General Indicators



Figure 1: Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP

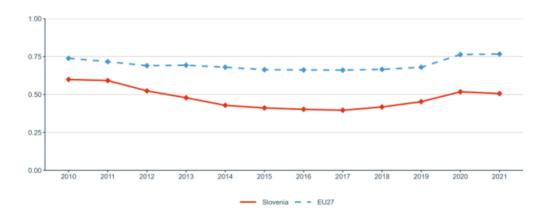


Figure 2: Government Budget Allocations for R&D (GBARD) as share of GDP

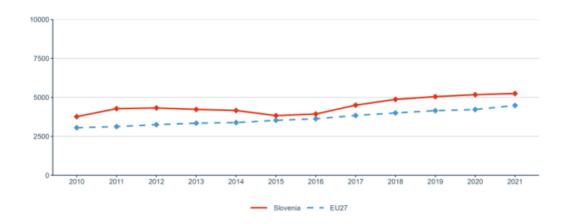


Figure 3: Researchers (in full-time equivalent) per million inhabitants



Figure 4: Business Enterprise expenditure on R&D (BERD) as a percentage of GDP

Priority 1: Deepening a truly functioning internal market for knowledge

Sub-priority 1.1: Open Science

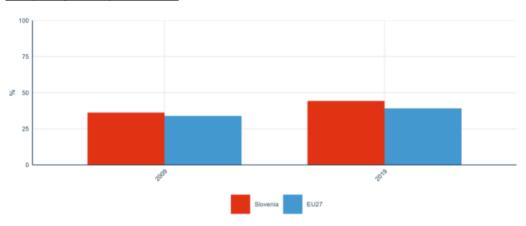


Figure 5: Share of publications available in open access

Sub-priority 1.2: Research infrastructures

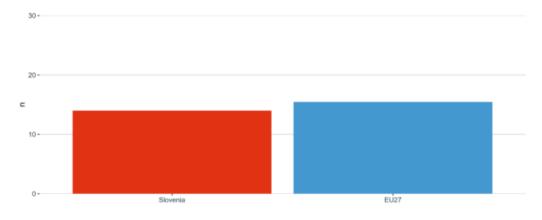


Figure 6: Number of European research infrastructures in which a Member State or an Associated Country participated (financially contributes to operations) in 2021

Sub-priority 1.3: Gender equality, equal opportunities for all and inclusiveness

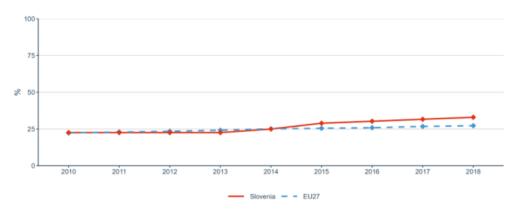


Figure 7: Share of women in grade A positions in HEIs

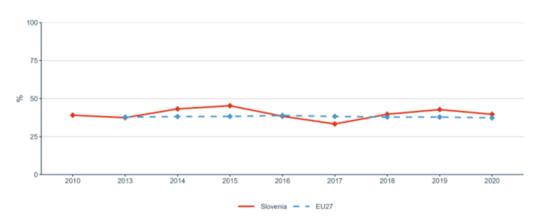


Figure 8: Proportion (%) of women among doctoral graduates by narrow fields of Science, Technology, Engineering and Mathematics (STEM)

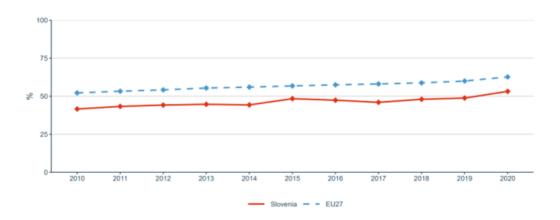


Figure 9: Proportion of papers with mixed gender authorship, 2000–2020



Figure 10: Proportion of women in authorships of the top 10% most cited publications, 2000–2018

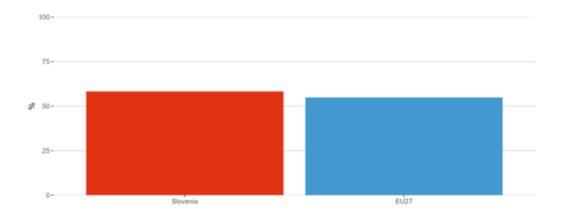


Figure 11: Women in Digital Index in 2022

<u>Sub-priority 1.4: Researchers' careers and mobility and research assessment and reward systems</u>

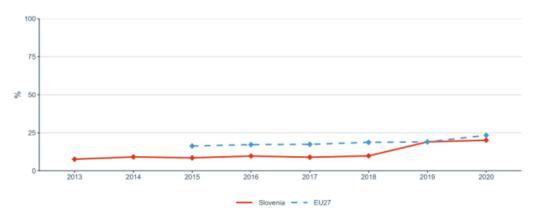


Figure 12: Share of foreign doctorate students as a percentage of all doctorate students



Figure 13: New doctorate graduates per 1,000 inhabitants aged 25-34



Figure 14: Job-to-job mobility of Human Resources in Science and Technology

Sub-priority 1.5: Knowledge valorisation



Figure 15: Share of public-private co-publications per 1 mio. inhabitants

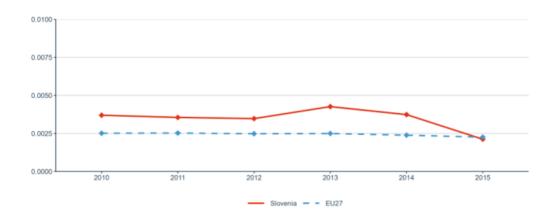


Figure 16: Number of PCT patent applications divided by GDP in million Euros

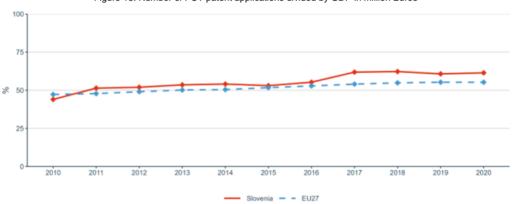


Figure 17: Business enterprise researchers as % of national researchers

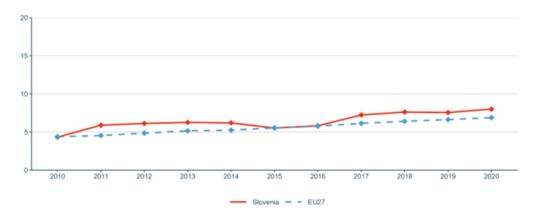


Figure 18: Business enterprise researchers in full-time equivalent per thousand employees in industry



Figure 19: Share of innovating firms collaborating with higher education institutions or public/private research institutions

Sub-priority 1.6: Scientific leadership



Figure 20: Number of scientific publications among the top-10% most cited publications worldwide as a percentage of all publications

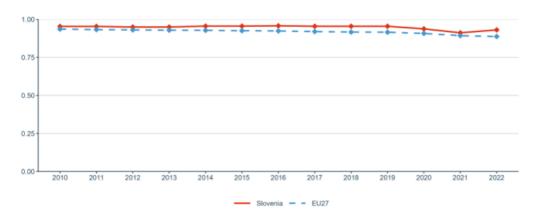


Figure 21: Academic Freedom Index (AFi)

Sub-priority 1.7: Global engagement

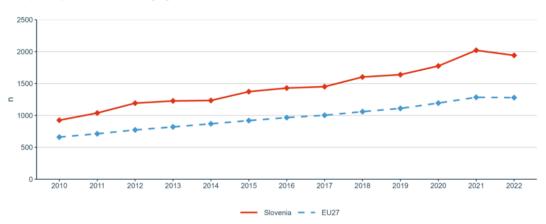


Figure 22: International co-publications with non-EU partners per 1,000 researchers in the public sector



Figure 23: European and international co-patenting in EPO applications at national and EU level

Priority 2: Taking up together the challenges posed by the twin green and digital transition, and increasing society's participation in the ERA

Sub-priority 2.1: Challenge-based ERA actions

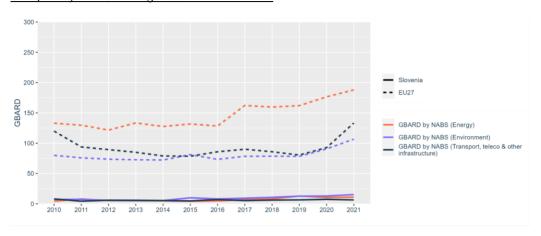


Figure 24: Government budget allocations for R&D (GBARD) by NABS

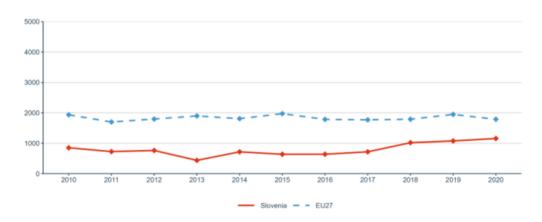


Figure 25: Government budget allocations for R&D (GBARD) allocated to Europe-wide transnational, as well as bilateral or multilateral, public R&D programmes per FTE researcher

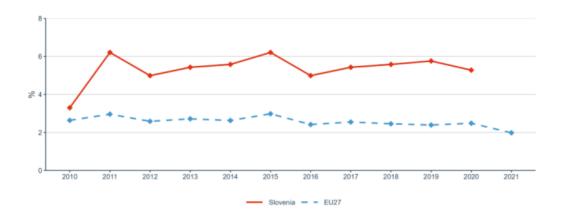


Figure 26: Environmentally related government R&D budget as percentage of total government R&D

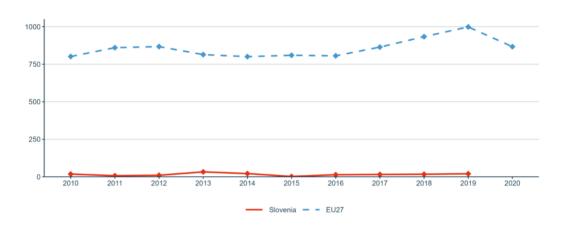


Figure 27: National public and private investments (in mio. EUR) as suggested in the SET Plan progress report 2021



Figure 28: OECD Patents on environment technologies

Sub-priority 2.2: Synergies with education and the European Skills Agenda

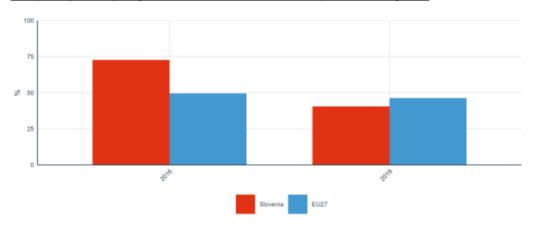


Figure 29: Share of researchers receiving transferable skills training

<u>Sub-priority 2.3: Synergies with sectorial policies and industrial policy, in order to boost innovation ecosystems</u>

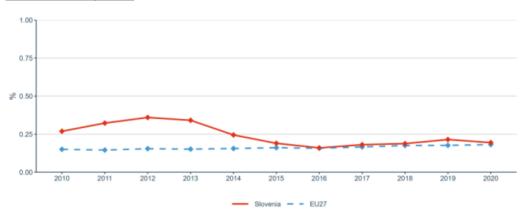


Figure 30: Direct government support and indirect government support through R&D tax incentives as a percentage of GDP

Sub-priority 2.4: An active citizen and societal engagement in R&I in all its dimensions

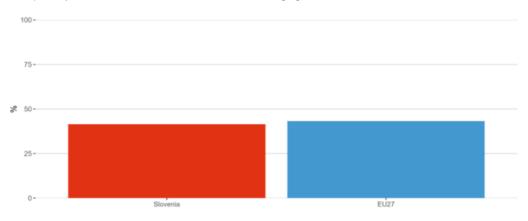


Figure 31: Trust in science in 2021

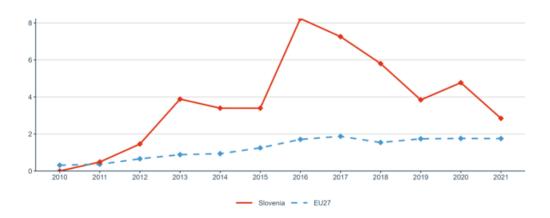


Figure 32: Research on social innovation (publications on 'social innovation' or 'social entrepreneurship') per million population

Priority 3: Amplifying access to research and innovation excellence across the Union

<u>Sub-priority 3.1: More investments and reforms in countries and regions with lower R&I performance</u>



Figure 33: Increase (in percentage points) of total R&D expenditure expressed as a percentage of GDP

Priority 4: Advancing concerted research and innovation investments and reforms

Sub-priority 4.1: Coordination of R&I investments

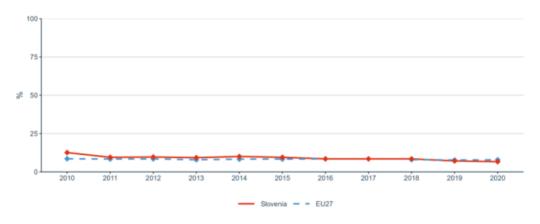


Figure 34: Share of public R&D expenditures financed by the private sector

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: and 32 22999696,
- via the following form: european-union.europa.eu/contact-eu/write-us en.

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (european-union.europa.eu).

EU publications

You can view or order EU publications at <u>op.europa.eu/en/publications</u>. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (<u>european-union.europa.eu/contact-eu/meet-us_en</u>).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal <u>data.europa.eu</u> provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

ERA Monitoring 2023: ERA Country Report Slovenia. Research and Innovation policy